

Hitachi Compute Rack xM Firmware List & Release Notes

Preface

This is a concise reference of all the recommended firmware, drivers, and utilities for the Hitachi Compute Rack xM (CR xM). Relevant release notes for firmware versions are also included.

Note:

- Since there are interdependencies, do not simply obtain the latest version and apply it.
- Contact Hitachi Data Systems' (HDS) Global Support Center (GSC) at the phone numbers found at <http://www.hds.com/support/> for guidance.

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Firmware Listing

<u>Version</u>	<u>Description</u>	<u>Status</u>	<u>eBOM Date</u>
01-11-00	Hitachi Compute Rack 210H/220H/220S BIOS/BMC FW Update Tool	GA	08/21/14
38-05-09	Hitachi Compute Rack 8Gbps Fibre Channel adapter firmware	GA	01/22/15
09-00	Hitachi Compute Rack 210H/220H/220S LSI RAID Card Firmware Kit (Maintenance)	GA	11/18/14
1.1.10/2.3.4	Hitachi Assurance Test Program (HATP) Kit for CR xM	GA	09/03/14

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BIOS/BMC FW Update tool Release Notes

The following is a listing of the relevant fixes or new features that were implemented in the noted levels of firmware.

Version 01-11-00

1. Improvement
[BMC]
Improve OpenSSL/TLS MITM Vulnerability.
- Upgrade to OpenSSL 1.0.1h from OpenSSL 1.0.1g.

Version 01-10-01

1. Improvement
[BMC]
(1) Improve OpenSSL Heartbleed Vulnerability.
- Upgrade to OpenSSL 1.0.1g from OpenSSL 1.0.1e.
(2) Improve the problem that Remote Console boot time is longer when a Client PC is using JRE 7u55.
(3) Make it possible to Backup/Restore Chassis ID on Web Console.
(4) Improve the problem that it may not be possible to Backup/Restore the settings about SVP communication with JP1/ServerConductor/BladeServerManager.
(JP1/ServerConductor/BladeServerManager is applied to only Japanese Model. So this improvement is applied to only Japanese Model.)

Related Document Versions

1. Hitachi Compute Rack series Maintenance Manual : revision. 14
2. Compute Rack 220HM/210HM/220SM BIOS/BMC FW/FRU/SDR Update Tool Procedure Guidance : revision. 16
3. Hitachi Compute Rack Remote Console Application User's Guide : revision. 4

Version 01-09-00

1. Improvement
[BMC]
(1) Improve the function of updating BMC.
- Delete unnecessary internal processing during updating BMC FW.
- Delete monitoring internal processing during updating BMC FW, be able to re-update BMC FW.
(2) Improve the problem that Power Cycle happens for recovering because of time-out of boot monitoring in POST.
[SDR]
(1) Decrease fan speed in the case that the system does not have 10GBase LAN Mezzanine.
(This improvement is applied to only CR220HM.)
2. New Feature and Functions
[BMC]
(1) Security strength - High Mode (NIST mode) supported BMC FW.
(2) Flash(Flex) Version Web Console supported BMC FW.

Related Document Versions

1. Hitachi Compute Rack series Maintenance Manual : revision. 12
2. Compute Rack 220HM/210HM/220SM BIOS/BMC FW/FRU/SDR Update Tool Procedure Guidance : revision. 15
3. Hitachi Compute Rack Remote Console Application User's Guide : revision. 02
4. Hitachi Compute Rack 210H/220H Remote Management User's Guide : revision. 04
5. Hitachi Compute Rack 220S Remote Management User's Guide : revision. 02

Version 01-08-00

1. Improvement
[FW Update Tool]
(1) Change FW update tool not to display "File Size Unmatch", when extending waiting time.
Purpose: Delete unnecessary process, even if the message is displayed, updating has no problem.

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(2) Change FW update tool not to run automatic recovery, when the result of checking "conf" directory file is incorrect during firmware update.

Purpose : If automatic recovery is executed, possibly FW update may fail. In this case, FW update won't run automatic recovery for the operator to do manual recovery (AC plug off/on).

(3) Add the following two options in [SUBMENU].

- Option to update the only BIOS

Purpose : (HDS)'s request.

- Option to clear BIOS NVRAM

Purpose : To boot the system correctly even if the BIOS NVRAM has some problems.

[BIOS]

(1) Update CPU Microcode for SNB-EP/EN to fix Hypervisor and guest OS hang-up issue.

[SDR]

(1) Increase fan speed to support 10GBase-T LAN Mezzanine.

(This Improvement is applied to only CR210HM, CR220HM.)

[Others]

No BMC change (The highest BMC version is 09.43)

Related Program Versions

None

Related Document Versions

1. Hitachi Compute Rack series Maintenance Manual : revision. 11
2. Compute Rack 220HM/210HM/220SM BIOS/BMC FW/FRU/SDR Update Tool Procedure Guidance : revision. 14

Restrictions

Change "Data Scrambling" setting item from "Disabled" to "Enabled" manually in BIOS Setup, when updating from BIOS 1.04 or lower to BIOS 1.06 with this tool. The reason is that the tool keeps the setting before updating.

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Version 01-07-00

1. Improvement

[FW Update Tool]

(1) Add process to update only LAN EEPROM in selection menu.

Purpose : Make process to recover when you fail to update only LAN EEPROM.

(2) When you choose normal update, it was changed from the following (a) flow to the following (b) flow.

(a) update flow (before change)

(i) display and choice of Menu -> (ii) check of configuration -> (iii) update of LAN EEPROM ->

(iv) update of BMC FW -> (v) update of FRU and SDR -> (vi) display of result(OK or NG)

(b) update flow (after change)

(i) display and choice of Menu -> (ii) check of configuration -> (iii) update of BMC FW ->

(iv) update of FRU and SDR -> (v) update of LAN EEPROM -> (vi) display of result(OK or NG)

Purpose : Prevent the process to update BMC/SDR/FRU from stop,
when you fail to update LAN EEPROM. (make it high priority updating BMC/SDR/FRU).

(3) Delete checking configuration as updating LAN EEPROM.

Purpose : Be able to forced update LAN EEPROM.

[BMC]

(1) Improve the problem to fail to login an LDAP server by using an LDAP bind DN.

(2) Improve BMC watchdog timer's checking function.

(3) Improve the problem that web server may not reply, when IP address is changed
as processing http or https function.

(4) Improve the problem that running over power-cycle make the system stop in POST process
and log "PS Configuration Error", with configuration to have two Power Units.

(But this problem is a problem peculiar to Japanese model.)

[Others]

No SDR change

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8Gbps Fibre Channel Adapter Firmware Release Notes

The following is a listing of the relevant fixes or new features that were implemented in the noted levels of firmware.

Version 38-05-09

1. New Functions/Improvements/Bug-fixes

1-1. Bug-fixes

- (1) Improvement to recognize connected devices which upper 2 bytes of PORT_ID are same as Fibre Channel adapter's PORT_ID according to the instruction by the driver at FC switch connection.
- (2) Fibre channel adapter machine check may occur when all the cache in the fibre channel adapter become busy status due to multiple write commands of the large transfer size are issued.
- (3) SCSI timeout may occur if the load balancing option of Access Gateway mode on FCSW is enabled.

Version 38-04-87

1. New Functions/Improvements/Bug-fixes

1-1. New Functions

- (1) Supported Cisco Nexus series.

1-2. Improvements

- (1) Improved Boot Driver(HBA-BIOS and EFI driver) not to disconnect any FC links after the SetBootPriority setting display is closed. Therefore after that all ports' WWN on the Fibre Channel Adapter can be confirmed on the connected FC-switch.

1-3. Bug-fixes

- (1) When powering on the server, the OS may lose connection to LUN.
- (2) In VMware environment, operation of getting snapshots for the guest OS may fail.

Version 38-04-71

1. New Functions/Improvements/Bug-fixes

1-1. Bug Fixes

See Appendix A for bug fixes.

Version 38-04-68

1. New Functions/Improvements/Countermeasures (Problems found at [v]Field or []Factory)

Fixed the following problems.

[Problem No.1]

Link up process of Hitachi Fibre Channel Adapter initiated by the following operations may fail intermittently and it may result OS losing a connection to a LUN.

- Disconnecting and reconnecting a fibre channel cable
- Disable and enable a port on Fibre Channel Switch
- Power off and on the connected device

[Problem No.2]

When power on the server blade, Hitachi fibre channel adapter may detect a hardware machine check intermittently.

When this problem happens, machine check event be logged in the system event log.

[Problem No.3]

When power on the server blade, link up process of Hitachi fibre channel adapter may fail intermittently and it may result OS losing a connection to LUN.

[Problem No.4]

When execute the I/O operation between the connection devices, it may be in a condition that a Hitachi fibre channel adapter cannot transmit the frame intermittently.

When this problem happens, link-error or SCSI time-out event be logged in the system event log.

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LSI RAID CARD Firmware Kit Release Notes

The following is a listing of the relevant fixes or new features that were implemented in the noted levels of firmware.

Note: This applies to both the version provided to customers as well as for the version provided for maintenance personnel.

Version 09-00

1. Bug fixes

- (1) Invalidated cacheline for direct IO and write through cache policy for raid level greater than and equal to 5.
- (2) Performance Degradation in RAID 5 Sequential Writes due to command Out-of Ordering.
- (3) Performance drop at QD 8 and above running 4 KB Seq. Read.
- (4) Fix for Infinite retries of command for sense code.
- (5) Consistency Check may cause a data corruption in Hitachi Compute Rack 2x0 using an Internal RAID Card.

2. Restrictions

- (1) Remaining capacity error of Super CAP Remaining capacity is displayed "105%" with MSM(11.08.03-02) and Firmware version 3.340.65-3296.
Error rate is 100%.
But, function is no problem.
- (2) Data protection function in firmware version 3.340.65-3296 is not supported.

Version 05-00

1. New Features and Functions

None

2. Bug Fixes

3.1.The FW on the LSI RAID board was changed from "PCIe Gen2 negotiation" to "PCIe Gen2/Gen3 negotiation".

Currently the FW is used Gen2 and Gen3 PCIe card.

- 1)RAID board for external connection(Gen3)
- 2)RAID board for internal connection(Gen2)

The same FW is used about these RAID boards.

Currently CR Series RAID card is only used Gen2.

So, this change is no impact for CR Series.(There is no change in function and performance.)

3.2."WebBIOS Power Management control table" was appeared.

The same FW is used about the other RAID boards.

CR Series are not using this function table.(The setting values are no change.)

So, this change is no impact for CR Series.(There is no change in function and performance.)

3. Firmware dependency

None

Hitachi Assurance Test Program Release Notes

The following is a listing of the relevant fixes or new features that were implemented in the noted levels of hitachi assurance test program.

Version 1.1.10/2.3.4

1. New Features and Functions

<HATP No.3>

- (1) Simple Log Collection Tool supports RHEL6.5.

Version 1.1.10/2.3.2

1. New Features and Functions

<HATP No.2>

- (1) BIOS backup/restore tool is improved. (Confirmation process before restoring is added.)

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(2) "Maintenance Utility" - "FRU/LAN Config Restore(BMC)" tool is improved. (Confirmation process before restoring is added.)

<HATP No.3>

(1) Windows Server 2012 R2 is supported.

(2) RHEL5.9 is supported

(3) New PCIe boards are supported.

- GQ-CN7841-Y/-R

- GQ-CN7743-Y/-R

- GQ-CN7823-Y/-R

- GQ-UH7400NCM-Y/-R

- GQ-UH7400NSM-Y/-R

- GQ-UH7200XCM-Y/-R

(4) Indication of the failed memory slot becomes detailed in Hardware Log Analysis Program.

Version 1.1.5/2.3.0

1. New Features and Functions

Hardware Log Analysis Program: "Save analysis results (detailed)" function is supported.

2. Bug Fixes

None

3. Firmware dependency

None